WEST Search History

| Hide Items | Restore | Clear | Cancel |

DATE: Wednesday, October 26, 2005

Hide?	Set Name	Query	Hit Count
		DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=ADJ	
☐	L7	L6 and (web service)	3
☐	L6	L5 and (provisioning)	31
☐	L5	L4 and @AD<20020930	296
☐	L4	(automate or automation or automating) near5 (business process)	478
☐	L3	L2 and (web service)	17
☐	L2	L1 and @AD<20020930	998
☐	L1	(provisioning near4 (process or module or agent))	1551

END OF SEARCH HISTORY

WEST Search History

| Hide Items | Restore | Clear | Cancel |

DATE: Wednesday, October 26, 2005

Hide?	Set Name	Query	Hit Count
		DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=ADJ	
☐	L14	L13 and l4	7
☐	L13	L12 and @AD<20020930	17
☐	L12	(web service) near4 catalog	35
☐	L11	web service catalog	4
☐	L10	L9 and (subsribe or subsription or subscribing)	2
☐	L9	L8 and @AD<20020930	56
☐	L8	(provision or provisioning) near8 (web service)	215
☐	L7	L6 and l1 and l2 and l3 and l4	2
☐	L6	service catalog near8 (select or selection or selecting)	17
☐	L5	service catalog	607
☐	L4	user profile	13869
☐	L3	business process	6125
☐	L2	workflow near3 engine	745
☐	L1	(provision or provisioning) near8 (service or process)	48648

END OF SEARCH HISTORY

☐ | Generate Collection |

L7: Entry 2 of 2   File: PGPB   Jun 26, 2003

DOCUMENT-IDENTIFIER: US 20030120502 A1
TITLE: Application infrastructure platform (AIP)

Summary of Invention Paragraph:
[0004] The evolution of the information technology (IT) industry has progressed
from Internet Service Providers (ISPs), to Application Service Providers (ASPs), to
Independent Service Vendors (ISVs), and related providers. Application Service
Providers (ASPs) offer their customers a mix of custom services, off-the-shelf
applications, and Independent Service Vendor (ISV) services. The end users of the
ASP services are the employees or customers of the ASP corporate customers. Each
ASP is a unique, one-off implementation, although the ASPs share architectures that
are roughly identical. An ASP independently solves the same set of problems
associated with running their business, such as service creation, provisioning,
policy management, security, Customer Resource Management (CRM), directory service,
access, and billing.

Summary of Invention Paragraph:
[0012] In another aspect of an embodiment of the present invention, an approach
provides an application infrastructure platform (AIP) having an ASP environment
with multiple ASPs providing application services to customer entities, and a
common services environment providing applications and integrated application,
back-office, and management services to the ASPs. The ASPs are connected by a
service bus to the common services environment and are connected by a ubiquitous
access system to a data network system and to the customer entities. The common
services environment includes a profile management system, an enrollment and
subscription system, a billing system, workflow management and rules engine
systems, and a customer rules management (CRM) system.

Detail Description Paragraph:
[0059] The AIP 114 may employ a best of breed (i.e., select-the-best) approach to
implement applications and services, which may be off-the-shelf, to populate an
infrastructure. The AIP 114 integrates applications and services together by
binding them in a loosely coupled arrangement through the use of multiple
technologies including, for example, message busses, Enterprise Java Beans (EJB),
Workflow Managers (WFMs), and Rules Engines (REs). Message busses allow messages to
be sent once and be received by many recipients; this has the added benefit that
network traffic is reduced because messages are transmitted only once on a subnet.
Enterprise Java Beans are encapsulated Java components that provide common
capabilities such as transaction management, security, and resource pooling placed
on servers other than a web server. This approach, thus, minimizes from the loading
on the web server by load balancing across other servers. Workflow Managers support
the automation of complex multi-step tasks, which may be tedious manual processes.
Rule Engines provide mechanisms for determining when an activity should be
initiated based on monitored events. Rules Engines and Workflow Management engines
work cooperatively to determine the appropriate course of action in response to an
event.

Detail Description Paragraph:
[0062] The Proprietor, through the AIP 114, may act as an "Application

Infrastructure Provider" by offering a tested and integrated environment with an infrastructure that supports the technical and business processes that underlie ASP services. The AIP 114 provides the core for "gluing" services together, and offering common services and applications that can be used in conjunction with each other and ASP-specific capabilities. The AIP 114 also provides the Proprietor the opportunity to leverage the platform to support other Proprietor projects.

Detail Description Paragraph:
[0078] Other OSS functions include system management, network management, and host management. The Support Services container 113 further provides BBS functions, which include provisioning, billing, and order entry. Provisioning of new customers, services, devices, and networking are done through Provisioning Management. Billing of AIP customers is done through the Billing system. The AIP supports the ability to provide billing in several ways. The ASP can receive a detailed bill, which it then breaks down to individual corporate portals and re-bills to its corporate customers. In addition, the AIP can perform the breakdown for the ASP together with re-branding of services and provide a summary to the ASP and bill the ASPs corporate customers directly for the ASP. Also, the Support Services container 113 includes a data warehouse, as well as decision support functions.

Detail Description Paragraph:
[0083] As evident from the above discussion, the AIP platform provides an advanced infrastructure and development environment, supplies the technical and business processes, and presents a tested and integrated environment for offering applications from a network. In addition, the AIP platform furnishes a complete, out-of-the-box ASP platform that delivers the services and features needed by an ASP for its customers.

Detail Description Paragraph:
[0096] FIG. 4 is a block diagram illustrating an AIP in a centralized architecture. Under this scenario, a central AIP 300 may utilize multiple ASP systems 301, 303, and 305, which couple to an AIP message bus 307, to provide application services to the ASPs (and their customers) as well as customers of the AIP 300. It is noted that, in another embodiment of the present invention, the AIP 300 may be distributed such that these ASP systems 301, 303, and 305 are serviced by numerous AIPs. An AIP Profile and Policy Management System 309 and an Enrollment and Subscription System 311 may access a Lightweight Directory Access Protocol (LDAP) directory 313. Enrollment, in an exemplary embodiment, pertains to corporate customers, whereby the corporate structure is used to build the profile. The subscription process permits the users to subscribe to service packages that are established based on the profile of the corporation. In other words, customers enroll and build the User profile, Service profile, Device profile, and Security profile to establish service packages that will be offered to a corporate staff according to the applicable profiles.

Detail Description Paragraph:
[0104] The AIPs 401, 404 connect to a network 425 of the Proprietor in support of a development and test environment encompassing a Network Operations Center (NOC) 413, a Proprietor legacy system (or resources) 415, and an Integrated Application Support Architecture (IASA) 417. The IASA 417 provides support for services provisioning, CPE/circuit installation, activation, event management, and billing to AIPs for their consumption of services. In an exemplary embodiment, the network 425 may become part of the AIP 401 and used to support distributed AIP implementations. The Proprietor Legacy Resources 415 may include applications that have been developed as well as those applications that are in development; these applications may be utilized by the AIP 401 and integrated into its the common services for use by the ASPs in serving their customers.

Detail Description Paragraph:

[0113] As seen in FIG. 6A, the AIP 517 may support multiple ASP/ISVs per site. The AIP 517 also provides localized ASP customer care needed for web based enrollment of new customers, setting up of service packages, subscription support, localized event collection, billing, reporting, and localized customer support. Local Workflow Management and Rules Engines coordinate development of needed products to accomplish these tasks. All of these activities are integrated onto a common message bus (EAI/MOM). External ASP/ISV services may be integrated along with local ASP/ISV services into a common product catalog that may be used by new ASPs to select their services for customization and resale to customers.

Detail Description Paragraph:
[0169] The AIP 1601 includes many common services that are used by the ASPs within the same site. The core of the AIP 1601 is the EAI 1611 that includes a MOM 1605, WFM 1607 and RE 1609 that control (business) process execution. Service Management 1633 supplies many common services that are involved in service delivery. For instance, when the Profile Manager 1613 creates and imports a new corporation hierarchy, the data that is needed by any other service is propagated to those services via pub/sub channels on the MOM 1605. Policy Manager 1617 interprets the service delivery means (UA) and the associated security that is needed to satisfy a security request.

Detail Description Paragraph:
[0174] AIP Enterprise Application Integration (EAI) 1611 supports automation and integration mechanisms for the following: Message Oriented Middleware (MOM) 1605, Work Flow Management (WFM) 1607, and Rules Engine (RE) 1609. The MOM 1605 provides publish and subscribe, point-to-point, and guaranteed delivery messaging. The WFM 1607 automates business processes, both with manual decision intervention and with rules engine to automate decisions based on events/conditions/actions, including those supported by the AIP Common Services. The Rules Engine (RE) 1609 provides automation of business rules that direct business processes either to manned decisions or automated (event, condition, action) decisions.

Detail Description Paragraph:
[0179] The IASA 1819 supports provisioning, billing, and SLA Management of the Proprietor global services in legacy systems, e.g., for circuit or customer premise equipment (CPE). Proprietor global services are any service provided by internal products and services, which are sold and/or supported directly to or by Proprietor.

Detail Description Paragraph:
[0183] The IASA also supports provisioning, billing and SLA Management of global services whereas the AIP supports these services for local ASPs. Global services run in the network as network elements and are not localized to AIP/ASP but can be subscribed to by customers through an AIP/ASP. A shared revenue scenario or model is presently described in detail. Therefore AIP 1801, SIP 1827, and WBIC 1825 interface with IASA 1819 to provision, bill and manage global services. SIP 1827 and WBIC 1825 interface with IASA via Intranet 1831. IASA 1819 in turn interfaces with Legacy systems 1826 to provision circuits and CPE.

Detail Description Paragraph:
[0199] FIG. 27 is an event diagram showing the enrollment of a Corporate Customer. Under this scenario, the involved agents are AIP Administrator 2701, Policy Manager 2703, Profile Manager 2705, Join Engine 2707, new Corporate Customer Human Resources (HR) database 2709, ASP Service 2711, and Corporate Administrator 2713. Each time an ASP "signs up" (or enrolls) a new customer, that customer can be provisioned into the supporting ASP's profile. Once the ASP's customer has a profile the ASP can manage the Customer. In step 1, the AIP Administrator 2701 logs in. The Policy Manager 2703 validates the login, per step 2. In step 3, the AIP Administrator 2701 creates a new Corporation Node under the ASP node. At this point, the Profile Manager 2705 adds the Corporation Node under the ASP profile,

per step 4. In step 5, the AIP Administrator 2701 populates the ASP with the Corporation's employee data. In step 6, the Profile Manager 2705 retrieves meta-data from the Corporations Human Relations database, and creates a join structure with the Corporate Profile and then extracts the employee data from the Corporate HR database and populates the join structure. User profiles are created for each employee and stored.

Detail Description Paragraph:
[0201] FIG. 28 is an event diagram showing an ASP adding service packs to a corporate portal. In this example, an ASP Administrator 2801 logs on, per step 1; the login is validated by a Policy Manager 2803 (step 2). In step 3, the ASP Administrator 2801 creates role definitions for the corporation. Next, in step 4, the Profile Manager 2803 creates the rolls and assigns specific users to the roles. This is iterated through the user hierarchy. In step 5, the ASP Administrator 2801 defines the service packages. Next, Profile Manager 2805, as in step 6, creates a service package, which is an aggregation of services for a user role, assigns the SLA terms and conditions to the service, and links the service package to roles in the user profile. Each user can access a set of services based on roles. In step 7, the ASP Administrator 2801 runs a sequence of verification tests and, together with the Corporate Administrator 2809, validates a selection of user roles.

Detail Description Paragraph:
[0204] FIG. 30 is an event diagram showing a process in which a customer enables users to self-subscribe. In this example, the customer is a Corporate Customer and provides its employees with the capability to perform self-subscription. The login process, as in steps 1 and 2, involves an End User 3001 logging in, and a Policy Manager 3003 validating the login. In step 3, the End User 3001 submits requests to subscribe to services to a Profile Manager 3005, which in turn obtains the subscriber information by way of a form and stores the updated User profile. In step 4, the End User 3001 selects the services, access, notification, and devices; this information is added to an End User Profile by the Profile Manager 3005, triggering a subscription event (per step 5). In step 6, the Event Manager 3009 receives the event and enables billing based on the services selected.

Detail Description Paragraph:
[0205] FIG. 31 is an event diagram showing an End User Accessing a Service. As with the previous processes, a Subscriber/End User 3101 logs in, per step 1. In step 2, a Policy Manager 3103 validates user using the Profile Manager 3105 to get the user's profile. In step 3, the user and devices used are then registered with the Presence Manager 3107. This records that the user is present and is available on at least one device. The device characteristics which the user is using are also recorded. The Policy Manager 3103, as in step 4, displays the services that the user can access via Corporate Portal 3109. In step 5, the End User selects a service. The ASP Service 3111 creates· a service usage event and sends the event· to the Event Manager 3113 for the purpose of generating usage, billing and SLA compliance data. ASP Service 3111 returns the service.

CLAIMS:

37. A system according to claim 10, wherein said integrated application and back office services include provisioning of new customers through provisioning management.

73. A method according to claim 72, wherein said first service provider provides said selection of customized services in a catalog of services offered by said first service provider.

Previous Doc   Next Doc   Go to Doc#
                    First Hit

☐ | Generate Collection |

L10: Entry 1 of 2   File: PGPB   Jun 5, 2003

DOCUMENT-IDENTIFIER: US 20030105864 A1
TITLE: Network services broker system and method

Application Filing Date:
20020111

Summary of Invention Paragraph:
[0015] In accordance with another embodiment of the invention, a network service broker for facilitating access by a service provision infrastructure to service functionality available via one or more networks is provided. The network service broker includes an interface to access the service functionality from a network infrastructure. The network service broker further includes a loosely-coupled interface exposed to the service provision infrastructure, where the loosely-coupled interface comprises a Web Services-based interface having Extensible Markup Language (XML) schemata built on top of a Web Services platform to expose the service functionality available via the network.

Detail Description Paragraph:
[0038] The present invention is directed to a system and method for facilitating access to functionality available on landline and/or wireless networks. The present invention implements network service brokers which simplify access to functionality available on various networks, either fixed or wireless. The network service brokers expose a loosely-coupled standard Web Service interface (or other standardized interface) towards the service provision infrastructure, and implement a well-defined enabling service.

Detail Description Paragraph:
[0060] As illustrated in the example of FIG. 3, a variety of different network service brokers may be implemented in accordance with the present invention. FIG. 3 illustrates a number of representative network service brokers 300. The authentication broker 302 offers authentication services, and the charging/payment broker 304 facilitates the charging of services to the subscriber. The location broker 306 facilitates determination of the subscribers' location. Notification 308 and content delivery 310 brokers offers services for applications to push content, such as multimedia messages, to subscribers. The content ordering broker 312 offers a means for service providers to offer digital content subscribing. The presence broker 314 maintains subscriber dynamic status information, and the client provisioning broker 316 facilitates the provisioning of mobile clients. The profile register 318 includes information regarding the subscriber service, and the type of rights that the subscriber has granted to service providers. The context broker 320 can be used to provide context information to the service provision infrastructure for creation of applications that are aware of the context of the end user, where context refers to the context in which the end user is with his/her terminal. Other 322 brokers may also be utilized.

CLAIMS:

5. The network system as in claim 1, wherein the loosely-coupled interface comprises a single loosely-coupled Web Service interface exposed to the service

<u>provision</u> infrastructure.

23. The method of claim 18, wherein exposing a loosely-coupled interface of the network service broker to the service <u>provision infrastructure comprises exposing a loosely-coupled Web Services interface to the service provision</u> infrastructure.

40. A network service broker for facilitating access by a service provision infrastructure to service functionality available via one or more networks, the network service broker comprising: an interface to access the service functionality from a network infrastructure; and a loosely-coupled interface exposed to the service <u>provision infrastructure, wherein the loosely-coupled interface comprises a Web Services</u>-based interface having Extensible Markup Language (XML) schemata built on top of a Web Services platform to expose the service functionality available via the network.

<u>Previous Doc</u>   <u>Next Doc</u>   <u>Go to Doc#</u>

☐ | Generate Collection |

L10: Entry 2 of 2   File: PGPB   Sep 27, 2001

DOCUMENT-IDENTIFIER: US 20010024497 A1
TITLE: Customer communication service system

Application Filing Date:
20010108

Detail Description Paragraph:
[0044] The system TSA switch 109 is a conduit for all calls to the customer site
and to voice clients 102 and provides fault-tolerant call processing and
scalability to a large number of non-blocking ports to host a pool of sharable
voice trunks for connectivity between callers and subscribing agents. TSA switch
109 is connected to voice clients through the telephone network 101, also via T1,
E1, OR HIGHER lines 110. The TSA switch 109 provides a holding place for calls that
are awaiting routing, as well as an ability to reject unwanted incoming calls. The
TSA switch 109 supports conference functions among subscribing agents and supports
call key referencing that enables voice/data call transfers, by associating context
data with voice calls. In the event that a failure occurs, the TSA switch 109 can
use T1, E1, OR HIGHER lines 111 to transfer impacted calls from a failed telephony
resource node to an alternative telephony resource node 112.

Detail Description Paragraph:
[0049] Providing a voice path to dynamically connected subscribing agents using
traditional phone networks;

Detail Description Paragraph:
[0057] Workflow management, provisioning system services, billing and accounting
services, database services and web services are located within one or more server
computers 114 connected to the LAN 115. The server computers 114 are also connected
to the Internet 104, and this connection may take place across a firewall 117. The
workflow managing function provided by computer servers 114 manages the
distribution and control of media events and client service requests. Media events
include email, on-line chat, self-help, web-based support, IP telephony and video,
voice, voice mail, and facsimile. The database services function provided by
computer servers 114 stores configuration, provisioning, statistical and account
activity information along with any information that must be reserved and
referenced by other system components. The web services function provided by
computer servers 114 manages the Internet based interfaces of the system. The
provisioning system provided by computer servers 114 manages and references all
subscriber-specific provisioning information. This includes retention of
definitions for agents, phones, skill and capability ratings, plan rates and other
subscriber-specific configuration information. The billing and accounting system
provided by computer servers 114 stores all information needed to generate or
reference billing for subscribers.

Detail Description Paragraph:
[0068] Playing of recorded audio announcements to users (both callers and
subscribing agents);

Detail Description Paragraph:

[0070] A voice path to dynamically connected <u>subscribing</u> agents, using the traditional phone network;

<u>Detail Description Paragraph</u>:
[0077] Now referring to FIG. 5, a functional block diagram 500 is shown, which further illustrates the customer application suites of the current invention (208, FIG. 2). The customer applications include an agent application 511 which may be browser based, that contains the suite of software tools that are accessible by the <u>subscribing</u> agents. The supervisor application 512 contains the suite of software tools that are accessible by the <u>subscribing</u> supervisors. It supports monitoring of both the current and historical status of the CSS operation. Administrative and provisioning suites 513 allow subscribers to setup and maintain their CSS services. These include tasks such as reserving toll-free numbers, adding authorized agents and controlling contact routing. Administrative and provisioning suites 513 use a combination of web-based and Windows based applications.

CLAIMS:

11. The customer communication service system of claim 4, wherein the workflow management computer servers are adapted to provide at least one function selected from the group consisting of <u>provisioning system services, billing, accounting, web services,</u> maintaining databases, and transferring client data to agents via the global data communications network.

☐ ▒▒ Generate Collection ▒

L18: Entry 3 of 3   File: PGPB   Dec 19, 2002

DOCUMENT-IDENTIFIER: US 20020194045 A1
TITLE: System and method for automatically allocating and de-allocating resources
and services

Application Filing Date:
20020430

Summary of Invention Paragraph:
[0009] The present invention helps organizations to build and evolve their
infrastructures to support business growth by automating core provisioning and
workflow activities, transforming traditional business processes into dynamic,
flexible processes. The present invention converts directory-based information into
business change profiles, using a business-oriented workflow engine to dynamically
allocate the appropriate resources for individual users--including access names and
passwords, email and network accounts, productivity applications, PCs, cellular
phones, and more. This is accomplished by tracking a user through the business
cycle from start to finish, recording changes to name, location, status, and more--
and automatically updating provisioned resources accordingly. When the cycle ends,
assigned resources are systematically and securely removed at the appropriate time.

Detail Description Paragraph:
[0045] Included in block 107 are directories, which are special purpose databases
optimized for reading, writing, and managing "profiles." Profile information is a
set of data about a person or resource that is changed infrequently, but referenced
(i.e., read) frequently. Directories and the services needed to manage them are
commonly referred to as "directory services." The Lightweight Directory Access
Protocol ("LDAP") is a standard way to name, manage, and access collections of
directory profiles. An increasing number of applications and devices store their
user profile information in an organization's centralized LDAP directory. Since
this profile information can be retrieved in a standard manner, many applications
and servers can share common user definitions. LDAP is an Internet Engineering Task
Force (IETF) standard as published in a set of Request for Comment (RFC) documents,
including RFC 2251. Sharing user profiles across applications simplifies the
managing of user profiles. The present invention leverages this "centralization of
data" to streamline and automate the configuration and set up of many applications,
devices, and services.

Detail Description Paragraph:
[0046] The present invention stores its BCP information in a standard LDAP
directory. This makes all user-profile information accessible to authorized
employees in a standard, secure, and reliable fashion. More importantly, it means
that the present invention can directly enforce network device configuration and
the set up of user accounts and group associations for many applications, simply by
managing the user profiles in its LDAP directory. The present invention will run
over any standard LDAP directory. Exemplary LDAP directories that can be utilized
by the present invention include Novell's NDS (eDirectory) version 8.x available ·
from Novell, Inc. of Provo, Utah, iPlanet's Directory Server version 4.3 from
iPlanet eCommerce Solutions of Palo Alto, Calif., Microsoft's Active Directory

available from the Microsoft Corporation of Redmond, Wash., and IBM's Secureway
Directory 3.1 available from the IBM Corporation of Armonk, N.Y.

Detail Description Paragraph:
[0105] This makes all user-profile information (i.e., BCAs) accessible to
authorized employees in a standard, secure, and reliable fashion. More importantly,
it means that the BCA can directly enforce network device configurations and the
set up of user accounts and group associations for many applications, simply by
managing the user profiles in its LDAP directory.

Detail Description Paragraph:
[0123] 4. A TEM to a PBX may allow automatically configuring an employee's user
profile as the direct outcome of task. In this case, the TEM is a small executable
file/script that performs IT activities on remote stations. After completion of the
IT task, the TEM sends a completion message to the MSMQ and exits.

☐ ▉ Generate Collection ▉

L19: Entry 1 of 3   File: PGPB   May 26, 2005

DOCUMENT-IDENTIFIER: US 20050114448 A1
TITLE: System and method for delegation of data processing tasks based on device
physical attributes and spatial behavior

Detail Description Paragraph:
[0042] The centralized server 30 may operate a known database system for recording
business process activity. From the perspective of the peer devices 14a-14c, the
centralized server 30 provides a primary business process data reception service 66
and a primary business process data provisioning service 67. Both the business
process data reception service 66 and the business process data provisioning
service 67 may be web services, the availability of which is published by the
server 30 in utilizing known web service description language (WSDL) technology and
which may be called utilizing method calls expressed as XML messages and packaged
using known standard object access protocol (SOAP) technology.

☐ ▐ **Generate Collection** ▌

L25: Entry 1 of 1   File: PGPB   Feb 19, 2004

DOCUMENT-IDENTIFIER: US 20040034540 A1
TITLE: Dynamic interface between BPSS conversation management and local business
management

Application Filing Date:
20020815

Detail Description Paragraph:
[0013] At one business site, a conversation process that handles document exchanges
is coupled with a local business process handling a workflow of tasks for document
processing and provisioning. In turn, these tasks are actually performed by the
concrete actions, services and other local business processes.

Detail Description Paragraph:
[0053] Different from WSDL [WSDL, "Web Service Description Language", www.w3c.org],
WSFL [WSFL, "Web Service Flow Language", www-
3.ibm.com/software/solutions/webservices/], Rosetta-net [WSCI, "Web Service
Choreography Interface", Tech Report by Italio, SAP, BEA, Sun Microsystems. 2002],
and BPML [BPML, "Business Process Markup Language", www.BPMI.org. 2002], that
support point of conversation not directly correlated at the process-level, this
work focuses on choreographed conversation. The standards body approach of dealing
with points of conversation can provide certain flexibility, but can hardly follow
a commonly agreed conversation model standard such as ebXML BPSS. Furthermore,
WSFL, BPML and WSCL, etc, are used to offer a single party view rather than the
public view, to the collaboration. As a result, an implementation does not present
a general model of peer-to-peer synchronized execution; for instance, it does not
intend to specify how the partner process instances are synchronized or are made
aware of the progress of the peer processes.

Previous Doc   <u>Next Doc</u>   <u>Go to Doc#</u>
<u>First Hit</u>

☐ | Generate Collection |

L3: Entry 5 of 17   File: PGPB   May 1, 2003

DOCUMENT-IDENTIFIER: US 20030084177 A1
TITLE: Mobile client provisioning <u>web service</u>

Abstract Paragraph:
A system and method for provisioning mobile clients on a network for use of network service applications via a provisioning <u>Web service</u>. At least one mobile terminal is coupled to at least one network service via the mobile client provisioning <u>Web service</u>. The provisioning <u>Web service</u> provides a single point of interface to the network service for provisioning the mobile terminal. The mobile terminal is provisioned by the provisioning <u>Web service</u> for use of at least one application provided by the network services where the provisioning includes at least configuring the mobile terminal for use of the application, and delivering the application to the mobile terminal.

Application Filing Date:
20011026

Summary of Invention Paragraph:
[0001] The present invention relates generally to network communications systems, and more particularly, to a system and method for provisioning mobile clients on a network via a provisioning <u>Web service</u>.

Summary of Invention Paragraph:
[0010] The present invention is directed to a system and method for provisioning mobile clients on a network via a provisioning <u>Web service</u>.

Summary of Invention Paragraph:
[0011] In accordance with one embodiment of the invention, a method is provided for provisioning mobile terminals for use of applications offered by one or more network services on a network. The method includes interfacing at least one mobile terminal to at least one network service via a provisioning <u>Web service</u>. The provisioning <u>Web service</u> provides a single point of interface to the network service for provisioning the mobile terminal. The mobile terminal is provisioned by the provisioning <u>Web service</u> for use of at least one application provided by the network service, where the provisioning includes at least configuring the mobile terminal for use of the application, and delivering the application to the mobile terminal.

Summary of Invention Paragraph:
[0012] In accordance with another embodiment of the invention, a system is provided for provisioning mobile terminals for use of applications provided by network service providers on a network. The system includes a <u>Web service</u> interface coupled between the mobile terminals to be provisioned and the network service providers. The <u>Web service</u> interface serves as a single interface to the network service providers providing the applications, and serves to control the provisioning procedures. The system also includes a <u>Web service</u> mobile terminal configuration module coupled to the <u>Web service</u> interface, to configure the mobile terminals for use of the applications as part of the provisioning procedures. A <u>Web service</u> data object delivery module is also provided, which is coupled to the <u>Web service</u>

interface to deliver the applications to successfully configured mobile terminals as part of the provisioning procedures.

Summary of Invention Paragraph:
[0013] In accordance with another embodiment of the invention, a system is provided for provisioning mobile terminals operable on a network. The system includes at least one mobile terminal coupled to the network, and at least one network service coupled to the network to provide an application via the network. A provisioning Web service is provided, which is coupled to the mobile terminal and the network service to control provisioning of the terminal via a single interface to the network service. The provisioning Web service carries out the provisioning by configuring application use settings on the mobile terminal and delivering the application to the mobile terminal.

Summary of Invention Paragraph:
[0014] In accordance with yet another embodiment of the invention, a system including a suite of Web services is provided to provision a terminal for use of an application on a network. The suite of Web services includes a client provisioning Web service to interface at least one mobile terminal to at least one network service. The client provisioning Web service provides a single point of interface to the network service for provisioning the mobile terminal for use of the application provided by the network service. A terminal management Web service configures application use settings on the mobile terminal to enable use of the application. A presence Web service connected via the network to the mobile terminal receives a terminal type of the mobile terminal. A delivery Web service is coupled to the presence Web service to receive the terminal type from the presence Web service, and to identify a data object for delivery corresponding to the terminal type upon successful configuration of the application use settings on the mobile terminal. A notification Web service is coupled to the delivery Web service to deliver the data object to the mobile terminal if the terminal type indicates that the mobile terminal is capable of receiving the data object via a push operation. If the mobile terminal is not capable of receiving the data object via a push operation, the notification Web service delivers to the mobile terminal an address of the data object stored at the delivery Web service.

Brief Description of Drawings Paragraph:
[0017] FIG. 1 is an exemplary embodiment of a network system providing a provisioning interface for controlling a provisioning process;

Brief Description of Drawings Paragraph:
[0018] FIG. 2 illustrates an exemplary embodiment of a network system architecture providing a mobile client provisioning Web service in accordance with the present invention;

Brief Description of Drawings Paragraph:
[0019] FIG. 3 is a block diagram illustrating an exemplary embodiment of a mobile client provisioning Web service in accordance with the invention;

Brief Description of Drawings Paragraph:
[0022] FIG. 6 is a block diagram of an exemplary provisioning procedure carried out in accordance with the mobile client provisioning Web service in accordance with the present invention; and

Brief Description of Drawings Paragraph:
[0023] FIG. 7 is a flow diagram of one embodiment of a method for provisioning mobile terminals using a Web service in accordance with the present invention.

Detail Description Paragraph:
[0025] The present invention is directed to a system and method for provisioning mobile clients on a network via a provisioning Web service. The provisioning Web

Previous Doc   Next Doc   Go to Doc#
                      First Hit

☐ | 　Generate Collection　 |

L11: Entry 3 of 12   File: PGPB   Aug 28, 2003

DOCUMENT-IDENTIFIER: US 20030163513 A1
TITLE: Providing role-based views from business web portals

Application Filing Date:
20020222

Cross Reference to Related Applications Paragraph:
[0001] The present invention is related to the following commonly-assigned U.S.
Patents, all of which were filed on Sep. 19, 2001: U.S. _____ (Ser. No.
09/955,788), "Building Disitributed Software Services as Aggregations of Other
Services"; U.S. _____ (Ser. No. 09/956,268), "Programmatic Management of Software
Resources in a Content Framework Environment"; and U.S. _____ (Ser. No.
09/956,276), "Dynamic, Real-Time Integration of Software Resources through Services
of a Content Framework". The present invention is also related to the following
commonly-assigned U.S. Patent, which was filed on Jan. 15, 2002: U.S. _____ (Ser.
No. 10/_____), "Provisioning Aggregated Services in a Distributed Computing
Environment". These U.S. Patents are referred to herein as "the related
inventions", and are hereby incorporated herein by reference. The latter patent is
referred to herein individually as "the provisioning invention".

Summary of Invention Paragraph:
[0010] Web services allow applications and services (referred to hereinafter as
services for ease of reference) to interact with one another using web-based
standards. The core set of standards on which web services work is being built
includes HTTP ("Hypertext Transfer Protocol"), SOAP ("Simple Object Access
Protocol") and/or XML ("Extensible Markup Language") Protocol, WSDL ("Web Services
Description Language"), and UDDI ("Universal Description, Discovery, and
Integration"). HTTP is commonly used to exchange messages over TCP/IP
("Transmission Control Protocol/Internet Protocol") networks such as the Internet.
SOAP is an XML-based protocol used to send messages for invoking methods in a
distributed environment. XML Protocol is an evolving specification of the World
Wide Web Consortium ("W3C") for an application-layer transfer protocol that will
enable application-to-application messaging, and may converge with SOAP. WSDL is an
XML format for describing distributed network services. UDDI is an XML-based
registry technique with which businesses may list their services and with which
service requesters may find businesses providing particular services. (For more
information on SOAP, refer to "Simple Object Access Protocol (SOAP) 1.1, W3C Note
May 8, 2000", which is available on the Internet at http://www.w3.org/TR/2000/NOTE-
SOAP-20000508- . See http://www.w3.org/2000/xp for more information on XML Protocol
and the creation of an XML Protocol standard. The WSDL specification is titled "Web
Services Description Language (WSDL) 1.1, W3C Note Mar. 15, 2001", and may be found
on the Internet at http://www.w3.org/TR/2001/NOTE- -wsdl-20010315. For more
information on UDDI, refer to the UDDI specification which is entitled "UDDI
Version 2.0 API Specification, UDDI Open Draft Specification Jun. 8, 2001", and
which can be found on the Internet at http://www.uddi.org/specification.html. HTTP
is described in Request For Comments ("RFC") 2616 from the Internet Engineering
Task Force, titled "Hypertext Transfer Protocol-HTTP/1.1" (June 1999).)

Detail Description Paragraph:

[0048] As used herein, the term "federated profile exchange" refers to a process whereby a federation authentication of an end user is performed (as disclosed in the provisioning invention); security attributes (such as the user's role) which are relevant for authorization are acquired, for this authenticated user; and profile data associated with these security attributes is resolved.

Detail Description Paragraph:
[0049] Before discussing further details of the present invention, it is helpful to review a bit of background information, including the technologies on which preferred embodiments of the invention are built. The related inventions defined techniques for managing web services and for providing an aggregation point where services can be aggregated to form new services which can their be deployed. Preferred embodiments of the related inventions are built upon a content framework such as a portal platform, because this type of framework provides many built-in services for content management and service hosting, such as persistence, personalization, and transcoding. The techniques disclosed in the related inventions extend the platforms to provide for aggregation, deployment, management, and provisioning of web services. A modeling composition tool was disclosed, which may be used to define an aggregated service; software resources can then be programmatically integrated according to this aggregated service definition. In addition, the aggregated services can be managed in an automated manner.

Detail Description Paragraph:
[0054] A block diagram illustrating a portlet structured as a web service proxy, according to the related inventions, is shown in FIG. 3. As shown therein, portlet proxy 350 includes a deployment interface 310, a system interface 320, and a functional interface 330. Portlet proxy 350 also preferably includes a provisioning interface 340. The portlet proxy communicates with a portal platform 300 using these interfaces, acting as an intermediary between the portal platform and the software resource 360 which carries out the function of interest. Details of each functional interface are specific to the web service provided by software resource 360, and do not form part of the related inventions. The related inventions, however, make the functional interface of the software resource 360 available as an interface 330 of the portlet proxy. (Exposing the functional interface using WSDL definitions and SOAP services may be accomplished using a commercially-available tool such as the IBM Web Services Toolkit, or "WSTK", during the deployment process, as was discussed in the related inventions.)

Detail Description Paragraph:
[0055] It should also be noted that, while preferred embodiments of the present invention preferably provide the deployment and system interfaces as well as the provisioning interface, alternative embodiments may omit one or more of these interfaces without deviating from the scope of the present invention.

Detail Description Paragraph:
[0056] The deployment, system, and provisioning interfaces are described in detail in the related inventions. A brief summary will now be provided. According to preferred embodiments of the related inventions, a deployment interface and a system interface are defined for each portlet which serves as a web service proxy (although in alternative embodiments, one or the other of these interfaces may be implemented). These interfaces may also be referred to as the deployment port type and system port type, respectively. A provisioning interface may also be defined. A portlet according to the related inventions thus defines a service provider type that includes the port types necessary for portal integration of software resources and service interaction and management, and when a provisioning interface is provided, for provisioning a service to be integrated in a portal. ("Port types" is a term used in the art to signify the specification of a portlet's operations, and "service provider type" is a term used to signify a collection of port types.)

Detail Description Paragraph:

☐ | Generate Collection |

L11: Entry 5 of 12   File: PGPB   Jul 17, 2003

DOCUMENT-IDENTIFIER: US 20030135628 A1
TITLE: Provisioning aggregated services in a distributed computing environment

Abstract Paragraph:
Methods, systems, and computer program products are disclosed for provisioning
software resources used with aggregated web services. The disclosed techniques
enable heterogeneous identity systems to be joined in the dynamic, run-time web
services integration environment. Authentication and authorization may now be
performed for the aggregated service, as well as for its sub-services. SOAP
("Simple Object Access Protocol") messages, as an example, may be used to relay
identity information among distributed services, whereby credentials may be
specified in the SOAP message header to accompany a service request specified in
the SOAP message body.

Application Filing Date:
20020115

Summary of Invention Paragraph:
[0003] The present invention relates to computer software, and deals more
particularly with techniques for provisioning aggregated services in a distributed
computing environment.

Summary of Invention Paragraph:
[0009] The core set of standards on which web services work is being built includes
HTTP ("Hypertext Transfer Protocol"), SOAP ("Simple Object Access Protocol") and/or
XML ("Extensible Markup Language") Protocol, WSDL ("Web Services Description
Language"), and UDDI ("Universal Description, Discovery, and Integration"). HTTP is
commonly used to exchange messages over TCP/IP ("Transmission Control
Protocol/Internet Protocol") networks such as the Internet. SOAP is an XML-based
protocol used to send messages for invoking methods in a distributed environment.
XML Protocol is an evolving specification of the World Wide Web Consortium ("W3C")
for an application-layer transfer protocol that will enable application-to-
application messaging, and may converge with SOAP. WSDL is an XML format for
describing distributed network services. UDDI is an XML-based registry technique
with which businesses may list their services and with which service requesters may
find businesses providing particular services. (For more information on SOAP, refer
to "Simple Object Access Protocol (SOAP) 1.1, W3C Note May 8, 2000", which is
available on the Internet at http://www.w3.org/TR/2000/NOTE-SOAP-20000508- . See
http://www.w3.org/2000/xp for more information on XML Protocol and the creation of
an XML Protocol standard. The WSDL specification is titled "Web Services
Description Language (WSDL) 1.1, W3C Note Mar. 15, 2001", and may be found on the
Internet at http://www.w3.org/TR/2001/NOTE- -wsdl-20010315. For more information on
UDDI, refer to the UDDI specification which is entitled "UDDI Version 2.0 API
Specification, UDDI Open Draft Specification Jun. 8, 2001", and which can be found
on the Internet at http://www.uddi.org/specification.html. HTTP is described in
Request For Comments ("RFC") 2616 from the Internet Engineering Task Force, titled
"Hypertext Transfer Protocol--HTTP/1.1" (June 1999).)

Summary of Invention Paragraph:

[0013] An object of the present invention is to provide a technique for provisioning aggregated web services in a distributed network.

Summary of Invention Paragraph:
[0019] To achieve the foregoing objects, and in accordance with the purpose of the invention as broadly described herein, the present invention provides methods, systems, and computer program products for provisioning aggregated services in a computing network. In preferred embodiments, one or more software resources provide an aggregated service, and this technique comprises: defining a provisioning interface of the aggregated service; specifying the provisioning interface in a service description document; obtaining credentials of a user of the aggregated service, according to the service description document; analyzing the obtained credentials; and allowing the user to perform the aggregated service if indicated by the analysis.

Summary of Invention Paragraph:
[0020] The technique may, further comprise defining a provisioning interface of at least one of the one or more software resources of the aggregated service, and for each of the at least one software resource, specifying the provisioning interface of a service performed by the software resource in the service description document or in one or more other service description documents. In this case, in addition to obtaining credentials of the user of the aggregated service, credentials may also be obtained for the at least one software resource, according to the service description document or the one or more other service description documents. Then the user is preferably allowed to perform selected services represented by the provisioning interfaces of the at least one software resource, if indicated by the analysis of these credentials as well.

Summary of Invention Paragraph:
[0023] A markup language is preferably used for specifying the service description document(s). The markup language is preferably Web Services Description Language ("WSDL").

Brief Description of Drawings Paragraph:
[0030] FIGS. 5A through 5E illustrate a sample WSDL document fragment which describes a provisioning service interface, according to preferred embodiments of the present invention;

Detail Description Paragraph:
[0035] The present invention defies techniques for provisioning the aggregated services that result from use of the related inventions. These techniques may also be adapted to aggregated services which are created in other ways, without deviating from the scope of the present invention. Furthermore, it should be noted that while discussions herein are in terms of provisioning "aggregated" services, an aggregated service is itself a web service (comprised of sub-services), and therefore the present invention may be used advantageously with those web services which may be considered as atomic services (and are therefore a degenerate case of aggregation where the set of aggregated "sub-services" has a single member).

Detail Description Paragraph:
[0045] Preferred embodiments of the present invention may extend the deployment interface to include provisioning information regarding the aggregated web service. Alternatively, a separate provisioning interface may be defined for this purpose, without deviating from the scope of the present invention. A sample provisioning interface specification 500 is shown in FIGS. 5A through 5E. By representing the provisioning port type or interface as a WSDL document, as disclosed herein, the provisioning information for a web service can then be programmatically registered in a registry, and information about the provisioning interface can be located and bound to programmatically at run time.

☐ ▐ Generate Collection ▌

L11: Entry 10 of 12   File: PGPB   Mar 27, 2003

DOCUMENT-IDENTIFIER: US 20030061404 A1
TITLE: Web services gateway

Application Filing Date:
20020923

Detail Description Paragraph:
[0051] The gateway module 500 is an application that sits between client
applications 15 and the web services 25 being consumed, intercepting communication
between them. Some communication between client application 15 and web service 25
occurs over the SOAP protocol, while some communication includes the exchange of an
API contract description, such as a web service description language (WSDL)
contract document. The gateway module 500 acts as a SOAP processor with respect to
communication between a web service 25 and a client application 15 used by a client
application user. Furthermore, the gateway module 500 acts as an API contract (for
example, WSDL) processor with respect to communication between a web service 25 and
a client application 15 used by a client application developer. Therefore, the
gateway module 500 transparently alters both the way the client application 15
calls the web service 25, and how the web service 25 appears to the client
application 15 without either party being aware of the gateway module 500.

Detail Description Paragraph:
[0112] The gateway module 300 delegates the authorized requests to the actual web
service 25, which may be either hosted locally or on remote systems. The reporting
module 1660 generates reports on the usage for billing and auditing purposes. The
deployment and registration module 1630 registers local and remote web services 25
with the gateway module 300. There is also an administrator console 1650 that is
used to perform administration tasks, including provisioning users, setting or
modifying access rights, generating reports, and other tasks desired for
administration purposes. Finally, the repository 1610 is used to store information
desired and accessible by components of the internal web services management system
1600. The repository 1610 may be a database. The components of the internal web
services management system 1600 may be software code or code embedded in hardware.

CLAIMS:

9. The gateway module as claimed in claim 7, wherein the response processor is a
web service description language processor for modifying a web service description
language contract.

36. The method as claimed in claim 34, wherein the step of modifying includes the
step of modifying a web service description language contract.

☐ | Generate Collection |

L11: Entry 11 of 12   File: PGPB   Feb 20, 2003

DOCUMENT-IDENTIFIER: US 20030036917 A1
TITLE: Service provision system and method

Application Filing Date:
20020425

Detail Description Paragraph:.
[0042] The present invention contemplates performing a wide variety of service
requests including, but not limited to, large-scale AIMs that include multi-part,
global, e-commerce exchanges, and scheduling, facilitating, and playing a variety
of media to multiple viewing, performing, and/or listening sites. Integration in
the telecommunications area may be envisioned by dynamically creating,
provisioning, and deploying value-added application services to residential and
enterprise broadband subscribers. As one example, the present invention may reduce
the inherent limitations of intelligent network systems that were originally
installed to overcome the high cost of mainframe-like proprietary services for
telecommunication companies. Unfortunately, those installed systems failed to
integrate services with back-office systems for billing, provisioning, network
management and customer care. Competitive Local Exchange Carriers (CLECs) and new
national network providers who offer a host of telephone, data and Internet
services must roll out new services quickly and integrate complex workflow
processes within multi-vendor environments, which requires dynamic creation,
provisioning and performing scalable, reliable, and real-time complex interactions
between separate systems for network events, network software, and back-office
applications.

Detail Description Table CWU:
1TABLE I EXAMPLES OF SERVICE COMMAND AND CONTROL PROTOCOLS Protocol Description
UDDI Universal Description, Discovery and Integration TpaML Trading Partner
Agreement Markup Language WSDL Web Services Description Language XAML Transaction
Authority Markup Language SSDP Simple Services Discovery Protocol DNS Domain Name
Service LDAP Lightweight Directory Access Protocol CORBA Trader Common Object
Request Broker Service Architecture Trader Service Salutation Salutation SLP
Service Location Protocol Jini Jini SSDS Secure Service Discovery Service SDP SOAP
Discovery Protocol UDDI Universal Description Discovery and Integration SCL SOAP
Contract Language WSDL Web Services Description Language Salutation Salutation
Resource Manager RDF Resource Description Framework XP XML Protocol SOAP Simple
Object Access Protocol XML-RPC XML Remote Procedure Call WebBroker Distributed
Object Communication on the Web WDDX Web Distributed Data eXchange XMI Metadata
Interchange BizTalk BizTalk Protocol EbXML Electronic Business XML GENA Generic
Eventing and Notification Architecture UpnP Universal Plug-n-Play